Proceeding: R.20-11-003

Exhibit No.: SDGE-3

Witness: E Bradford Mantz

PREPARED DIRECT TESTIMONY OF SAN DIEGO GAS & ELECTRIC COMPANY REGARDING DEMAND RESPONSE PROPOSALS

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

January 11, 2021

TABLE OF CONTENTS

PREPARED DIRECT TESTIMONY OF SAN DIEGO GAS & ELECTRIC COMPANY REGARDING DEMAND RESPONSE PROPOSALS

I. INTRODUCTION

The purpose of this testimony is to provide information regarding San Diego Gas & Electric Company's (SDG&E) proposed Emergency Load Shed Pilot (ELSP), as well as to offer new SDG&E proposals regarding demand response (DR) and to provide information requested by the Commission.

In the *Assigned Commissioner's Scoping Memo and Ruling* (Scoping Memo) issued in this proceeding on December 21, 2020, the California Public Utilities Commission (Commission) identified as a primary issue to be addressed in this proceeding the question of how to decrease demand during the peak demand and net demand peak hours in the summer of 2021. In particular, the Commission will seek to identify those actions that can be adopted by April 2021 and implemented before or during the summer of 2021.[1]

The Scoping Memo includes within the scope of the proceeding several issue areas with the potential to "reduce demand during peak and net peak demand hours" where possible solutions to further the Commission's reliability objectives might be identified,[2] and invites proposals related to those topics. The Commission issued a separate ruling, the *Administrative Law Judge's Ruling Introducing a Staff Report and Questions to the Record and Seeking Responses from Parties in Opening and Reply Testimonies* on December 18, 2020 (ALJ Ruling),

[1] Scoping Memo, pp. 1-2.

[2] *Id*. p. 2.

which presents "guidance and questions for parties to address in developing their own proposals due January 11, 2021."[3]

II. THE COMMISSION SHOULD ADOPT SDG&E'S PENDING PROPOSAL FOR AN EMERGENCY LOAD SHED PILOT

In response to the heat storm and subsequent electrical grid emergency that occurred in August, 2020, SDG&E filed Advice Letter (AL) 3615-E[4] seeking Commission approval to make changes to SDG&E's existing DR programs and to establish a new customer DR pilot, the ELSP, designed to increase participation in the DR program. The proposals contained in AL 3615-E are based upon SDG&E's conclusion that: (1) new DR load could be shed in emergencies; and (2) small changes to existing programs might yield incremental load shed in such events. SDG&E's AL 3615-E was filed shortly after the August, 2020 heat storm in order to respond to grid needs; the Commission subsequently initiated the instant proceeding to address the very same issues.

The objectives underlying the proposals contained in SDG&E's AL 3615-E are the same as those underlying the instant rulemaking – to reduce demand during peak and net peak demand hours. Accordingly, the Commission should expeditiously approve SDG&E's AL 3615-E so that the pilot program can be implemented before summer of 2021.

SDG&E does not support adoption of the Emergency Load Reduction Program (ELRP) discussed in the ALJ Ruling for SDG&E's service territory. Aspects of the ELRP are not viable for SDG&E given its budgetary constraints and current limitations on its ability to implement billing system changes. SDG&E notes, however, that it is willing to consider modifications to its ELSP to better align with the other investor-owned utilities (IOUs). SDG&E discusses such

[3] ALJ Ruling, Attachment 1, p. 1.

[4] AL 3615-E, filed September 25, 2020, which can be found at: http://regarchive.sdge.com/tm2/pdf/3615-E.pdf.

potential modifications below and responds to questions included in the ALJ Ruling regarding proposals for emergency load reduction.

A. SDG&E's Proposed ELSP

Like the ELRP discussed in the ALJ Ruling, SDG&E's ELSP is an emergency DR program that would offer an incentive payment to participating customers for verified load shed during specific grid emergencies at the request of either the California Independent System Operator (CAISO) or SDG&E. SDG&E requests that the Commission expeditiously approve SDG&E's. AL 3615-E in order to ensure that its ELSP can be implemented in time for summer 2021.

Currently the majority of SDG&E's largest commercial and industrial (C&I) customers do not participate in DR programs for many reasons: fatigue from many called events, penalties for non-performance, incentives deemed by the customer to be too low to be of interest, quick event activation notification windows etc. The goal of SDG&E's ELSP is to test whether a pure "pay for performance" DR program with no penalties and a higher incentive than current DR programs, will motivate medium and larger C&I customers to participate in a DR program. The ELSP will:

- Test the attractiveness of a program that has no penalties and is limited in scope to grid emergencies;
- Test the impact of a higher incentive rate on customer program enrollment and retention; and
- Test the ability of the customer to shed load upon SDG&E's request, for emergency events; specifically, the amounts and types of load that will be shed.

Since the ELSP's incentive mechanism pays program participants only for verified load drop, ratepayers are afforded cost protection.

To be eligible to participate in the ELSP, the customer must be a medium or large C&I customer as defined in SDG&E's Electric Rule1[5] that agrees to shed a minimum of 100 kilowatt (kW) per event. The 100 kW minimum load drop is necessary since a smaller kW amount would create significant administration burden given that most program management during the early stages of the pilot, including settlement calculations, will be managed through a manual process outside of SDG&E's current Customer Information System (CIS). SDG&E is currently in the midst of a "freeze" period for its new CIS, which is expected to go live in April 2021, followed by a 6-9 month stabilization period. The implementation timeline includes a "freeze" period for changes to SDG&E's legacy CIS system during 2020 and 2021 to reduce the overall risks and customer impacts during the transition to the new system. The "freeze" period requires that any new structural rate changes or other similar initiatives be deferred to permit the transition from the legacy CIS to the new system.

The ELSP would not be available to or through Third Party Aggregators or Demand Response Providers (DRPs) due to these same CIS system limitations. However, based upon discussions with the other IOUs, third parties and Energy Division staff, SDG&E would consider modification of its ELSP, as proposed, to permit limited dual participation. Specifically, SDG&E would consider allowing limited dual participation in its ELSP by customers of record who are enrolled in SDG&E's Base Interruptible Program (BIP), Capacity Bidding Program (CBP), or SDG&E's C&I rates that include a DR component such as Critical Peak Pricing (CPP-

[5] SDG&E Electric Rule 1 - http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-RULES_ERULE1.pdf.

D). To implement this change to the ELSP, SDG&E would seek to amend the program once AL 3615-E is approved by the Commission.

SDG&E proposes in AL 3615-E that the ELSP be adopted as a pilot program for 2021 and 2022. It proposes that costs be tracked in SDG&E's Advanced Meter and DR Memorandum Account (AMDRMA), similar to other DR programs. Costs will be recovered through SDG&E's Rewards and Penalties Balancing Account.

B. Responses to Questions in ALJ Proposal Related

SDG&E offers the following responses to the questions included in the ALJ Ruling.[6] While the questions in the ALJ Ruling focus on the ELRP, SDG&E's responses relate to its proposed ELSP.

1. <u>Program Trigger</u>. CAISO suggests "the dispatch trigger [for ELRP] could be a Warning or Stage 1 emergency or its equivalent." What is the case for or against limiting the trigger to CAISO-declared Warning/Emergency stage vs. extending the trigger discretion to Alerts or day-ahead?

SDG&E proposes that the ELSP be called for system emergencies (CAISO alerts and stages), transmission emergencies (loss of resources), and local transmission and distribution system (overload) emergencies at SDG&E's discretion. SDG&E suggests that the ELSP be called not via a Flex Alert, but by a more formal declaration of a CAISO Stage 1, 2, or 3 Alert or Warning as all of these indicate more criticality by CAISO to the needs of the grid. However, the ELSP could be called by the CAISO at any time for any reason either Day Of or Day Ahead based on imminent or immediate grid conditions without issuing an Alert or Stage. SDG&E would consider either a CAISO issued Flex Alert or CAISO issued Warning as a precursor to a potential event being called. Additionally, as mentioned above and in AL 3615-E, SDG&E also

[6] ALJ Ruling, Attachment 1, p. 5. Numbering corresponds to the numbering in the ALJ Ruling.

requests the discretion to call or activate the ELSP for local emergencies or conditions as needed outside of a CAISO called emergency.

1.a. Should the ELRP be allowed or required to dispatch before the Base Interruptible Program (BIP) is triggered? If yes, under what circumstances should this be allowed? Are there any other conditions that should be met before ELRP could be dispatched?

Since SDG&E's ELSP is an emergency pilot, it should be triggered as needed by either the CAISO or SDG&E without any other restrictions.

1.b. Should the IOUs be allowed to trigger ELRP for localized transmission and distribution emergencies? Why or why not?

Yes. SDG&E should be permitted to trigger its ELSP for a local transmission or distribution emergency. There could be local emergency situations where SDG&E can, and must, react more quickly than the CAISO. In such an event, and where there is a potential impact on the CAISO-controlled transmission system, SDG&E will notify the CAISO as quickly as practicable. SDG&E has a shared responsibility for grid reliability; the unilateral ability to trigger the ELSP is a helpful tool.

2. Eligibility - Load Reduction Resources:

i. Should customers who are already enrolled in IOU (directly or via aggregators) or third-party demand response programs or critical peak pricing be permitted to participate in the ELRP? If so, what specific program rules will be needed to ensure that dual participants are not compensated twice for the same load reductions? If there are distinctions in the rules depending on the DR program or rate, please describe. Please provide an estimate of potential MWs available for each dual participation permutation.

As discussed in AL 3615-E, the ELSP would be available only to customers that are not currently enrolled in an SDG&E DR program or on a rate with a DR component. At this time, neither residential nor third parties would be eligible to participate in the ELSP due SDG&E's current CIS system constraints.

As noted above, SDG&E is willing to consider changes to its originally - proposed ELSP to permit participation by SDG&E's C&I customers that are participating in a SDG&E DR program or rate, so long as those customers meet the minimum load shed requirement of 100 kW. Allowing third parties to participate in the ELSP is not feasible until SDG&E's billing system limitations are alleviated.

If the Commission approves limited dual participation, such customers should be allowed to participate only in instances where the DR program or rate with a DR component they are on has not been awarded by the CAISO or activated by SDG&E, as applicable. This is necessary to avoid the possibility of double payment. With programs that are not activated due to tariff restrictions, dual participation customers would be able to participate outside those programs subject to the 100 kW minimum load drop set forth in the proposed ELSP. As an example, SDG&E's CBP is not available on weekends or holidays per the approved Tariff. Customers participating in the CBP could participate in the ELSP on weekends and holidays subject to the minimum 100 kW load drop requirement. This would eliminate the possibility of double payments even though the customer is participating in both a DR program or rate and the ELSP at the same time. In other words, an existing DR Program activation, would be primary and the ELSP activation would be considered secondary for settlement and payment purposes.

Based on observable summer 2020 voluntary load shed, SDG&E estimates that its proposed ELSP could provide between 25 megawatt (MW) - 75 MW of incremental load drop per event.

ii. What rules and processes need to be in place to ensure that the load reductions expected from dual participants are appropriately accounted for and communicated to CAISO for grid operations?

If dual participation is permitted, an additional level of review and verification would need to be added to the current procedures for reviewing customers participating in an ELSP event to ensure that they are eligible and have not already been awarded for another DR program or received benefits pursuant to another rate with a DR component. As discussed above, if a customer is participating in an existing DR program, then that existing DR program's activation would be considered primary and the ELSP activation would be considered secondary for settlement and payment purposes. This will prevent double payments to the same customer for the same load shed.

For informational purposes, SDG&E will notify the CAISO of each SDG&E activation of the ELSP as soon as practicable.

iii. Should customers be permitted to use prohibited resources during an ELRP event to achieve incremental load reduction in excess of any load reduction commitments under other dual enrolled DR programs?

ELSP events will be called only in emergency situations. While backup generators (BUGS) are prohibited resources in other circumstances, SDG&E believes that it is reasonable to allow BUGS to operate during an ELSP event to help respond to the emergency. This approach is consistent with the exemptions allowing use of such prohibited resources issued by both the Commission and the Governor of California during the August 2020 heat storm.

3. Program Administration and Implementation.

a. Should the IOU's establish a voluntary tariff program that could be open for new customer enrollment in advance of summer 2021?

Yes. SDG&E respectfully requests that the Commission approve its AL 3615-E, which will enable SDG&E to implement its proposed ELSP in advance of summer 2021. If SDG&E is instead ordered to implement the ELRP discussed in the ALJ Ruling or to maintain its ELSP for a five-year period rather than the period contemplated in AL 3615-E (*i.e.*, through 2022), it would require significant additional funding through its Rewards and Penalties Balancing Account in order to cover incentives, IT expenses, settlement expense and administrative costs. The funding required to implement the ELSP (or the ELSR) is separate from SDG&E's existing 2018 - 2022 approved DR funding cycle and is outside of the yet-to-be-filed 2023 - 2027 DR funding application.

The ELSP program budget proposed in AL 3615-E assumes no more than five events per year with a cap of 100 MW per event through the end of 2022. If the program is expanded beyond SDG&E's original ELSP proposal, SDG&E would seek Commission approval for additional funding for the ELSP covering the five years of the pilot (2021 through 2025), estimated to be $21,050,000. The expanded budget was calculated based on an estimated maximum of 100 MWs of load shed that provides 400 MWh of load shed per event, and a maximum of 10 ELSP events per season. This funding amount would be required to cover incentives, IT expenses, settlements, and administrative costs. While SDG&E does not know the exact amount of MWh load reduction that would be achieved, it has estimated at the higher end in anticipation of robust customer participation. SDG&E collects actual expenses in arrears, which helps to protect ratepayers, since it limits cost recovery to only what is spent.

An estimated budget breakdown per year based on the above inputs, and assuming SDG&E's proposed ELSP is extended to cover five years, is shown in Table 1 below:

TABLE 1

Budget	2021	2022	2023	2024	2025	Total
Incentives	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 15,000,000
Administration including IT, E&MV and ME&O	$ 370,000	$ 370,000	$ 2,770,000	$ 1,270,000	$ 1,270,000	$ 6,050,000
Total	$ 3,370,000	$ 3,370,000	$ 5,770,000	$ 4,270,000	$ 4,270,000	**$ 21,050,000**

4. What should be the specified "pay for performance" compensation rate(s) ($/MWh) for load reduction or energy supply achieved by participants during an ELRP dispatch?

SDG&E proposed in its AL 3615-E tha**t** participating customers receive a payment for each event called to which they responded, and for every hour of verified load drop (kWh), multiplied by the incentive amount. Customers who enroll and participate in the ELSP shall be paid a maximum energy reduction payment rate of $0.75 per kWh of verified actual energy reduction up to their nominated load shed. The payment will be calculated based on the customer's actual verified load reduction as calculated by SDG&E after the event. Payments to customers participating in the ELSP who drop load will be paid by check by SDG&E within 90 days after the event.

SDG&E's proposed compensation rate is calculated based on a percentage of the CAISO's Locational Marginal Price (LMP) for SDG&E's CAISO-defined Sublap. As part of its process for determining the appropriate incentive, SDG&E solicited input from customers to gain a better understanding of what level of incentive would increase program participation.

III. CHANGES TO EXISTING IOU DR PROGRAMS

A. Base Interruptible Program (Questions 1-3)

SDG&E continues to seek to deliver the most effective strategies to attract and retain participants in the BIP, while preserving or improving BIP's contribution to the grid. SDG&E has offered proposals in its AL 3522-E and AL 3615-E (both are currently pending before the Commission) that, if approved, would provide additional opportunities for customers to participate in BIP and help with adding additional MW for summer of 2021, thereby achieving the objectives of the OIR. Specifically, AL 3615-E proposes to: (1) waive the current 100 kW minimum requirement for participation in BIP; and (2) open BIP to all non-residential customers.[7] AL 3522-E proposes to update the measuring hours for customers' "monthly average peak demand" to align the measuring hours for customers with "availability assessment hours" on which BIP's performance is measured. SDG&E respectfully requests that the Commission expeditiously approve both Advice Letters.

The current BIP tariff allows direct participation in the program for Customers who can commit to reducing at least 15% of their Monthly Average Peak Demand and at least 100 kW of load drop when a demand response event occurs. This latter requirement creates an obstacle to participation; in SDG&E's territory, the pool of qualifying BIP direct customers is very small due to the 100 kW load drop requirement. If SDG&E's pending ALs are approved, the number of eligible customers would increase, and this would bring additional load shed during events. SDG&E also has significant room under its 2% BIP cap to add customers who are in the less-than-100kW pool of potential new customers and will market the program directly to them. The

[7] AL 3615-E, submitted September 25, 2020, p. 5.

changes proposed in SDG&E's pending ALs can be implemented quickly within the existing budgets for summer 2021.

B. Capacity Bidding Program (CBP) (Questions 4 and 5)

In accordance with the direction set forth in the ALJ Ruling,[8] SDG&E offers these comments in response to the questions included therein. Numbering reflects the ALJ Ruling's question numbers.

4. What would be the most effective ways to attract and retain CBP participants, while preserving or improving the program's contribution to grid reliability? Potential actions include increasing capacity incentives, reducing penalties for underperformance, or limiting the number of allowed events per a month or year.

SDG&E has proposed changes in its AL 3522-E and AL 3615-E that, if approved, would provide additional opportunities for customers to participate in the CBP Program and thereby further the objectives of the OIR. In AL 3615-E, SDG&E proposes to: (1) increase the CBP maximum number of events from six to nine per month; (2) increase August through October capacity incentives for the CBP Day-Of 1:00 p.m.-9:00 p.m. product; and (3) suspend the current dual participation restrictions. AL 3522-E, SDG&E proposes to: (1) align notification time with the other IOUs to be 5:00 p.m. for the CBP Day-Ahead product; (2) update CBP Day-Of product notification time to 40 minutes to allow SDG&E to bid into the CAISO Day Of market; and (3) launch the CBP Residential CBP Pilot in 2021.

SDG&E submits that these proposed modifications offer effective ways to attract and retain CBP participants, and be implemented quickly with no additional CBP budget required, while preserving or improving the program's contribution to grid reliability. Accordingly, SDG&E respectfully requests that the Commission approve these two ALs.

[8] ALJ Ruling, p. 7 ("Parties are encouraged to address the following questions related to CBP . . ..").

While SDG&E does not propose any additional CBP program modifications in this proceeding, it notes that any additional CBP requirements established by the Commission through this proceeding could be implemented by SDG&E after the Commission approves its pending ALs.

5. For party proposals, please describe the proposed program modifications, including quantifying parameters where appropriate, and provide the rationale. Please provide an estimate for additional MWs that could result from the changes. Similarly, if you oppose any of these changes, please explain why.

As discussed above, SDG&E has offered proposals in AL 3522-E and AL 3615-E designed to increase participation in the CBP Program.

C. Proposals related to Air Conditioner Cycling Programs and Smart Thermostats (Questions 6-9)

SDG&E has proposed solutions in its AL 3522-E and AL 3615-E that, if approved, would provide additional opportunities for customers to participate in SDG&E's smart air conditioner cycling program, the AC Saver program. Specifically, SDG&E proposes in AL 3522-E to make residential net energy metering (NEM) customers eligible for the AC saver program. It proposes in AL 3615-E to change the maximum number of events from 20 to 25 with the additional 5 events reserved for CAISO or SDG&E emergencies. SDG&E respectfully requests that the Commission approve these two pending ALs.

In addition, to approving the changes proposed in SDG&E pending ALs, the Commission should approve in the context of this rulemaking the following new proposed changes to SDG&E's AC Saver program and its Technology Deployment program:

1) Increase the AC Saver Day Ahead program's annual participation payment from $20 per year to $40 per year. This program is SDG&E's AC thermostat control program that pays an annual incentive for participation.

2) Increase the Technology Deployment (TD) program incentive from $50 to $100 per thermostat. The TD program provides an incentive to customers who purchase a smart thermostat and register and join a DR Program.

3) Establish and incentive and grant authorization to pursue emergency agreements with device manufacturers who already have devices participating in the AC saver program to signal existing installed thermostats that are not in an existing DR program to secure additional load shed

These proposals are discussed further below in the responses to the questions posed in the ALJ Ruling.

6. Should incentives for residential air conditioner cycling be increased to limit attrition or increase enrollment? If so, please provide the recommended incentive amount and the aggregate budget and capacity impacts of the increase. If not, please explain why.

- *AC Saver Day Ahead Program Incentive Increase*: As noted above, SDG&E proposes to increase the annual incentive for the AC Saver day-ahead thermostat option from should $20 per year to $40 per year. The annual incentive for the AC Saver day-of switch option should remain the same.

SDG&E submits that increasing the AC Saver day-ahead thermostat annual incentive from $20 to $40 will increase enrollment and improve retention. SDG&E estimates that the additional cost to make this change for both 2021 and 2022 would be between $900,000 and $1,200,000. SDG&E proposes to cover the cost of the increase in the incentive by using unspent 2018-2020 incentives from Category 1. The Commission permits the IOUs to fund-shift between programs

in the same category with appropriate monthly reporting.[9] SDG&E anticipates that this proposed incentive increase, combined with the proposed increase in the upfront TD thermostat incentive discussed below, will add between 1,500 and 5,000 incremental thermostats to the program per year, which equates to an additional 0.6 to 2.0 MW of available load drop per year.

- *TD Program Incentive Increase*: Under SDG&E's "bring your own thermostat" (BYOT) model, customers buy and install approved thermostats themselves and then receive a TD incentive for enrolling the thermostat in an approved DR program such as SDG&E's AC Saver program, the demand response auction mechanism (DRAM) or a rate with a DR events component. SDG&E proposes herein to raise the technology deployment incentive from $100 per kW to $200 per kW to encourage additional enrollment – this will result in a change to the thermostat incentive from $50 to $100 per thermostat. SDG&E believes that this changes, paired with allowing residential NEM customers to join AC Saver, as requested in AL 3522-E, would increase participation and able to be funded out of existing funding for 2021 and 2022 as well as unspent approved 2018-2020 AC Saver incentives. This proposal will require a budget of approximately $1,200,000. SDG&E estimates that the capacity impact would be 4 MW.
- *Authorization to Pursue Emergency Agreements with Device Manufacturers*: Some manufacturers of devices participating in programs may have the ability to dispatch additional customers who are not enrolled in an SDG&E or other third-party DR program in extreme situations such as a CAISO stage 2 or stage 3 alert

[9] D.17-12-003, p. 134.

or a SDG&E local emergency. SDG&E requests CPUC authorization to pursue emergency agreements with manufacturers willing to dispatch additional customers without formal enrollment of the individual participating customers in a DR program.

The emergency agreements would include incentive payments to manufacturers who can provide this type of additional load reduction. Payments to manufacturers will be required to be far below CBP incentive amounts in order to avoid any potential cannibalization of existing aggregator programs and will be required to be paid out of existing approved Category 1 administrative budgets to limit spending. No incentives would be to individual customers under this option.

In addition, this option will only be available to manufacturers with devices participating in the SDG&E AC Saver program who have demonstrated that they can effectively provide load reduction during an emergency. This limitation is necessary because SDG&E may be unable to independently verify the load reduction using meter data based on emergency agreements alone due to the lack of formal enrollment of the individual customers. However, SDG&E will require participating device manufacturers to provide aggregated device data which demonstrates that a load reduction occurred. SDG&E will also require that the manufacturer provide device serial numbers or other data as needed to ensure that no customers who are already participating in another DR program in SDG&E's territory are dispatched as part of the emergency agreement.

This proposal has the potential to quickly increase the load reduction available to SDG&E during emergencies without the additional IT and

administrative costs associated with managing and tracking individual customer enrollments and payments. Individual program enrollments are necessary in order to verify load reduction and avoid dual participation, however SDG&E contends that these goals can be achieved by device data provided such that participation is limited to manufacturers already approved and providing a verified load reduction in the AC Saver program.

Quantifying budget and capacity impacts requires additional information regarding the appropriate level of incentives and likely participation, which will be derived through negotiation with device manufacturers. Accordingly, the budget and capacity impacts are unknown at this time.

7. Explain how the deployment of smart thermostats will be integrated with existing IOU or third-party demand response programs and/or critical peak pricing rates and specify the customer segments that will be targeted.

SDG&E currently offers a BYOT program, whereby customers may purchase their own thermostat and receive an incentive through SDG&E's TD program for enrolling the thermostat in a demand response program.[10] To qualify for the incentive, a customer must enroll in either SDG&E's AC Saver program, a rate with DR events, or DRAM. SDG&E's proposal to raise the TD program incentive from $100 per kW to $200 per kW (*i.e.*, increasing the incentive from $50 to $100 per thermostat) would encourage additional enrollment and would incentivize more customers to buy new devices and register for a DR program of their choice, which would result in new thermostats integrating across many different SDG&E and Third-Party DR Programs.

[10] www.sdge.com/thermostat.

SDG&E would focus its efforts on increasing participation by adding residential NEM customers in SDG&E's AC Saver Thermostat program. In addition, SDG&E would target customers who receive advertising through thermostat applications (or "apps") and websites provided by thermostat manufacturers. SDG&E also uses website advertisements and social media to drive customers to its DR website and these methods will reach additional customers interested in any of the program options.

SDG&E does not foresee targeting customers on rates with events since the vast majority of customers enrolled on rates with events are commercial. To date, commercial enrollments under the BYOT model have been far lower than residential enrollments. SDG&E also does not plan to target current or potential DRAM participants; doing so would be inappropriate given that third parties are responsible for their own DRAM marketing to potential DRAM participants.

8. Provide the number of smart thermostats that could be deployed in time for summer 2021, the amount of the rebate, the total budget, and the method of cost recovery. Provide an explanation for the rebate amount.

SDG&E estimates that the increase of the TD thermostat incentive from $50 to $100 combined with the increase AC Saver incentive could bring in between 1,500 and 5,000 additional or new thermostats by summer of 2021. If the increase in the TD incentive from $50 to $100 is put in place for both 2021 and 2022, using a high-end estimate of 10,000 new customers for the two-year period and the incremental $50/unit incentive cost results in an increase of $500,000 per year. SDG&E proposes to cover these costs using existing incentive budgets in Category 4 Enabling Technology programs.

9. Estimate the additional amount of MWs that could be reasonably anticipated from the proposal. Please explain how the estimate was calculated.

Based on the average preliminary 2020 *ex post* results for the August 2020 heat storm event, the AC saver residential program provides a 0.4 kW load reduction per customer. SDG&E estimates that an additional 1,500-5,000 customers per year could be enrolled per year with the higher incentives, which would result in an estimated additional load impact of between 0.6MW to 2.0 MW per year.

D. Additional Information Requested in ALJ Ruling (Questions 10-13)

10. For PDR resources that are procured for Resource Adequacy (IOU, DRAM and third-party non-DRAM PDR resources) and are able to dispatch only in response to CAISO Day-Ahead Market awards, should the CPUC adopt a bid price cap for these resources bidding in the CAISO Day-Ahead market for the purpose of increasing the probability of these resources being utilized and dispatched during periods of grid stress experienced in Real-Time Market? If so, what should that bid price cap be set at and why?

No, the Commission should not adopt a price cap for such Proxy Demand Response (PDR) . Please see response to Question 11 below.

11. What are the potential positive and negative consequences of the Day-Ahead market bid price cap?

Imposing a bid price cap will not increase, and may ultimately reduce, the amount of PDR resources that are made available for Resource Adequacy (RA) procurement. If the bid price cap would require that a PDR resource make its capacity available at a price that is less than the opportunity costs that the PDR resource expects to incur in order to make its capacity available, it will simply decline to offer any RA capacity for procurement. It is not economically efficient to impose rules that could require resources to operate at a loss.

12. Based on preliminary settlement data received by the CPUC, demand response resources (IOU and third-party operated) did not always deliver up to their commitments during the 2020 heat waves. This information will be made public in the Final Root Cause Analysis on the August 14 and 15 rotating outages that is anticipated to issue before end of 2020. Please provide: a. reasons for the results and b. solutions that address the reasons you provide.

SDG&E addresses its own IOU-DR performance below. SDG&E does not provide an explanation for why third party-operated DR resources, such as DRAM, did not perform up to commitments, but reserves the right to comment on the explanations provided by other parties.

a. *Reason for results*: SDG&E's demand response programs as a whole performed in line with its RA commitments on August 14, when it received CAISO awards. Table 2 below shows that the average load reduction from all the programs dispatched on 8/14/20 was 13.4 MW, which is 96% of the RA commitment of 14 MW.

TABLE 2

Date	Program	Even Time	August RA allocation (Mw)	Average Load Reduction (MW)
8/14/2020	BIP (1)	6:00pm-8:00pm	0.9	0.0
8/14/2020	AC Saver DA Commercial (thermostats)	5:00pm-9:00pm	0.9	0.4
8/14/2020	AC Saver DA Residential (thermostats)	5:00pm-9:00pm	6.6	5.3
8/14/2020	CBP-DA 1pm-9pm	5:00pm-9:00pm	0.1	0.4
8/14/2020	CBP-DA 11am-7pm	3:00pm-7:00pm	0.2	0.2
8/14/2020	AC Saver DO (Summer Saver)	5:00pm-9:00pm	2.2	4.0
8/14/2020	CBP-DO 1pm-9pm	5:00pm-9:00pm	2.5	2.3
8/14/2020	CBP-DO 11am-7pm	3:00pm-7:00pm	0.7	0.8
	Total		14.0	13.4

(1) Customers enrolled in BIP were shut down for the weekend.

However, some individual programs did not meet commitments. The SDG&E BIP program did not perform well because the small number customers enrolled on the program have already shut down for the weekend and had no load to shed at those times.

b. *Solutions*: SDG&E is addressing this by attempting to recruit customers who are open during later hours of the program. SDG&E also proposed in AL 3615-E to change the time period used to calculate the BIP capacity incentive from 1:00- 6:00 p.m. to 4:00 p.m. to 9:00 p.m., which will also encourage customer who can reduce load between 4:00 p.m. and 9:00 p.m. to enroll. The AC Saver day-ahead thermostat program impacts also dropped in later hours. AC Saver load impacts from 7:00-9:00 p.m. are still generally lower than the impacts from 4:00-7:00 p.m. so results for an event that occurs from 6:00-8:00 p.m. or 7:00-9:00 p.m. will not always be as high as the forecast average load impact from 4:00 p.m. to 9:00 p.m.

SDG&E may provide additional comments on this topic once it has had the opportunity to review the Final Root Cause Analysis Report.

13. IOU DR programs are required to demonstrate cost-effectiveness using the methods described in the Demand Response Cost-Effectiveness Protocols. Considering the acute reliability needs being considered in this proceeding, should the CPUC waive cost-effectiveness analyses and requirements for any DR program changes that might be ordered in this proceeding? Please provide a rationale for your position.

In general, and as a matter of sound policy, SDG&E believes that cost-effectiveness should be taken into account when considering any program changes in order to protect ratepayers. While SDG&E did not submit a cost-effectiveness analysis with its AL 3615-E, it submits that this is reasonable for two reasons. First, it is generally not necessary to demonstrate that pilot programs are cost-effective while they are being tested and then considered for longer term utilization. Second, the small changes SDG&E proposed therein for its existing programs would serve only to *increase* the cost-effectiveness of the programs in question by increasing their MW potential (by adding events and lowering barriers to potentially increasing enrollment) without additional budget being sought. There was not a risk of a lower cost-effectiveness analysis in that case.

VI. CONCLUSION

This concludes SDG&E's prepared direct testimony.

BRADFORD MANTZ – STATEMENT OF QUALIFICATIONS

My name is E Bradford Mantz. My business address is 8335 Century Park Court, San Diego, California 92123. I am employed by SDG&E as the Demand Response and Segmentation Manager for Customer Programs. My responsibilities include the design, implementation and management of demand response programs for SDG&E. I have held various roles at SDG&E since joining SDG&E in 2010.

I graduated from University of Texas, Austin with a Bachelor of Arts in Business Administration with emphasis in Marketing and Petroleum Land Management and a minor in Geology.

I have testified previously before the California Public Utilities Commission.